E-1300 Standard Series

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Standard In-line eductor for firefighting foam generation

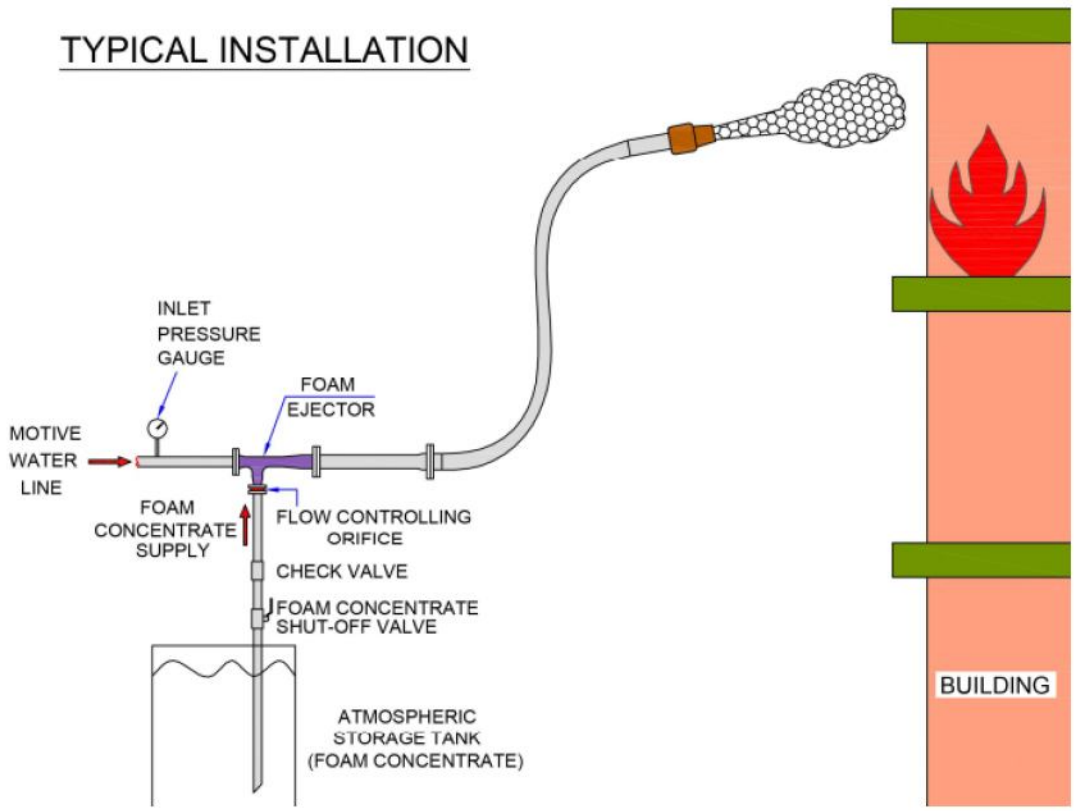
The Primetech E-3000 Series eductors are firefighting foam proportioning devices. They are designed to introduce a pre-determined amount of foam concenterate into water to effectively produce firefighting foam.A metering device or valve can be adjusted to produce output foam concentrations of 0.25%, 0.5%, 1%, 3% and 6% using the same ejector.The ejector comes with a clear PVC pick up hose.

Model number*	Motive water flowrate from fire pump	Inlet size (male threaded)	Outlet size (Female threaded)
E-1301-S	60 GPM	1.5”	1.5”
E-1302-S	95 GPM	1.5”	1.5”
E-1303-S	125 GPM	1.5”	1.5”
E-1304-S	250 GPM	2.5”	2.5”

(*Standard product designed for a motive pressure of 200 psi or 14.1 Kg/cm^2 for the above mentioned motive water flowrates, custom made eductors for other operating conditions are done on request.)

Offered materials of construction: Brass/SS304/ Aluminium with PTFE lining.

Product warranty: 1 year from the date of supply.



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THE EJECTOR SPECIALISTS

FOAM PROPORTIONER EDUCTOR FOR FIRE FIGHTING - E1300 Series

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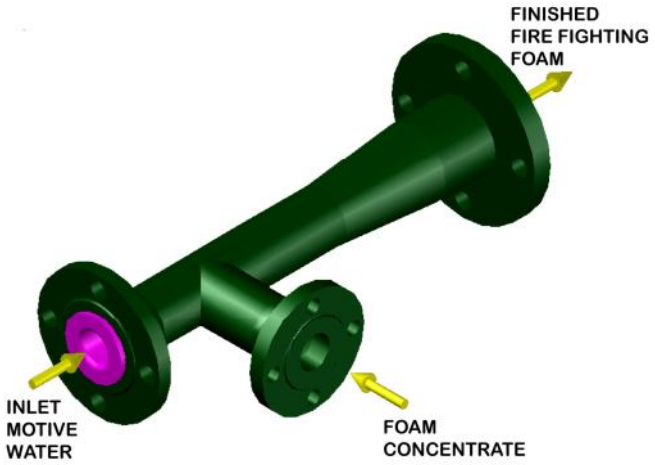
- Foam Eductor is a type of foam proportioner that is designed to introduce a foam concentrate into the water streams to produce firefighting foam.
- These eductors are constant flow devices that produce accurate proportioning of foam concentrate at a specified flow and pressure.
- Foam eductors are usually portable devices however they can also be used in fixed system applications.



PRINCIPLE OF OPERATION

- Foam Eductor is a device that uses the venturi principle to introduce a proportionate amount of liquid concentrate into a water stream.
- The venturi is the constricted portion of the waterway near the Eductor inlet. This restricted passage increases water velocity, thus momentarily reducing its pressure as it passes into the larger area of the induction chamber. Concentrate is introduced into this reduced pressure area through a metering device. The venturi orifice performs as a very efficient straight bore nozzle that is calibrated for a given flow at a given pressure.
- The foam coming out of the discharge device is called the finished fire -fighting foam. Finished foam is a combination of water, foam concentrate, air and mechanical agitation.
- The foam concentrate varies in the finished fire- fighting foam as :

FOAM TYPES	FOAM CONCENTRATES	WATER PERCENTAGE
Fluroprotein	1%	99
Aqueous Film Forming Foam (AFFF)	3%	97
Alcohol Resistant Foam	6%	94

- Fluroprotein foam which is the most commonly used, a 3% setting is generally followed.

DESIGN ASPECTS

- Foam proportioning eductors require inlet pressures in the range of 10-14 Bar (150-200 PSI) to meet the functional requirement and to overcome the system frictional loss and foam monitor head loss.
- Optimum pressure of the above range has to be selected because higher pressures will cause foam quality to deteriorate while the lower pressures will reduce the reach of foam streams.
- The eductor has to be selected after considering the limitation of permissible back pressure. A maximum back pressure of 50% of the inlet pressure may be considered.
- In fixed system, the eductor can be mounted above the foam concentrate tank. In this case, one should ensure that the eductor is mounted at a maximum of 2.4-3 m (8-10 ft) above the bottom of the foam liquid storage container.
- The metering device or valve can be adjusted to vary the foam concentrate in the finished fire fighting foam.

Application

Foam Eductors are mainly used by municipal or airport fire departments where rapid, simple and cost effective deployment of a foam proportioning device is required. These eductors are also capable of generating and discharging fire extinguishing foam to a deck of the ship where fire is most likely to take place.

• Refineries • Chemical Plants • Loading docks	• Tanker Berths • Railroad yards • Offshore platforms

ADVANTAGES

No moving parts	Self -priming
Easy to install	Simple & reliable
Easy to maintain	Safe
	Low Cost

MATERIAL OF CONSTRUCTION

SL.NO.	DESCRIPTION	Type - 1	Type - 2	Type - 3
1	BODY, DIFFUSER & NOZZLE	Aluminiuma alloy IS : 617	Bronze IS:318, LTBII	SS304 ASTM A351-CFB
2	ORIFICE	Bronze IS:318, LTB-II	Bronze IS:318, LTBII	SS304 ASTM A351-CFB

WE CAN ALSO OFFER IN THE FOLLOWING MATERIALS

- SS316
- MILD STEEL

END CONNECTIONS

Flanged to ANSI B16.5 150# as a standard. We can also provide other standard and end connection as required.

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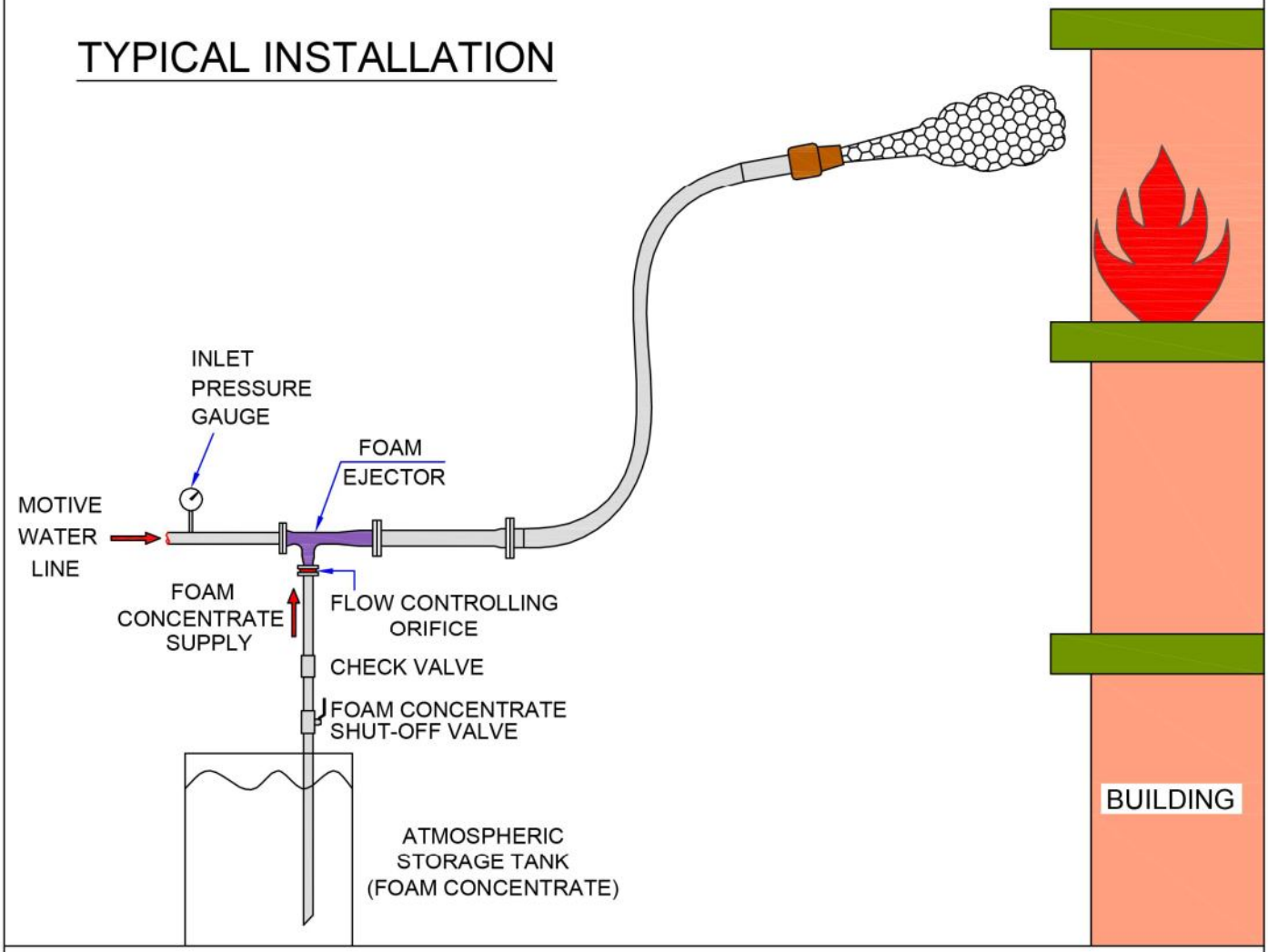
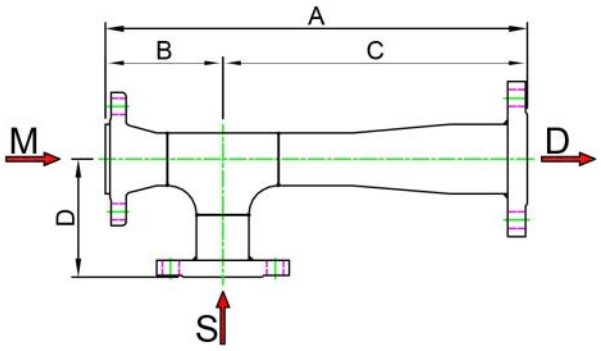
TYPICAL INSTALLATION



PRODUCT DIMENSIONAL DATA



Model		Flow Rate m^3/hr	End connection (NB)			Overall Dimensions (mm)			
			M	S	D	A	B	C	D
E1301.5	A	14	40	20	40	300	65	235	65
	B	22	40	20	40	300	65	235	65
E1302.5	A	27	65	25	65	410	75	335	90
	B	48	65	25	65	410	75	335	90
	C	55	65	25	65	410	75	335	90
	D	60	65	25	65	410	75	335	90
	E	80	65	25	65	410	75	335	90
	F	90	65	25	80	480	120	360	110
	G	109	65	25	80	480	120	360	110
	H	125	65	25	80	480	120	360	110
E1303	A	136	80	40	100	530	130	400	120
	B	150	80	40	100	530	130	400	120
	C	166	80	40	100	530	130	400	120
E1304	A	136	100	50	150	600	140	460	140
	B	150	100	65	150	600	140	460	140
E1304	A	136	150	50	200	700	150	550	150
	B	150	150	65	200	700	150	550	150

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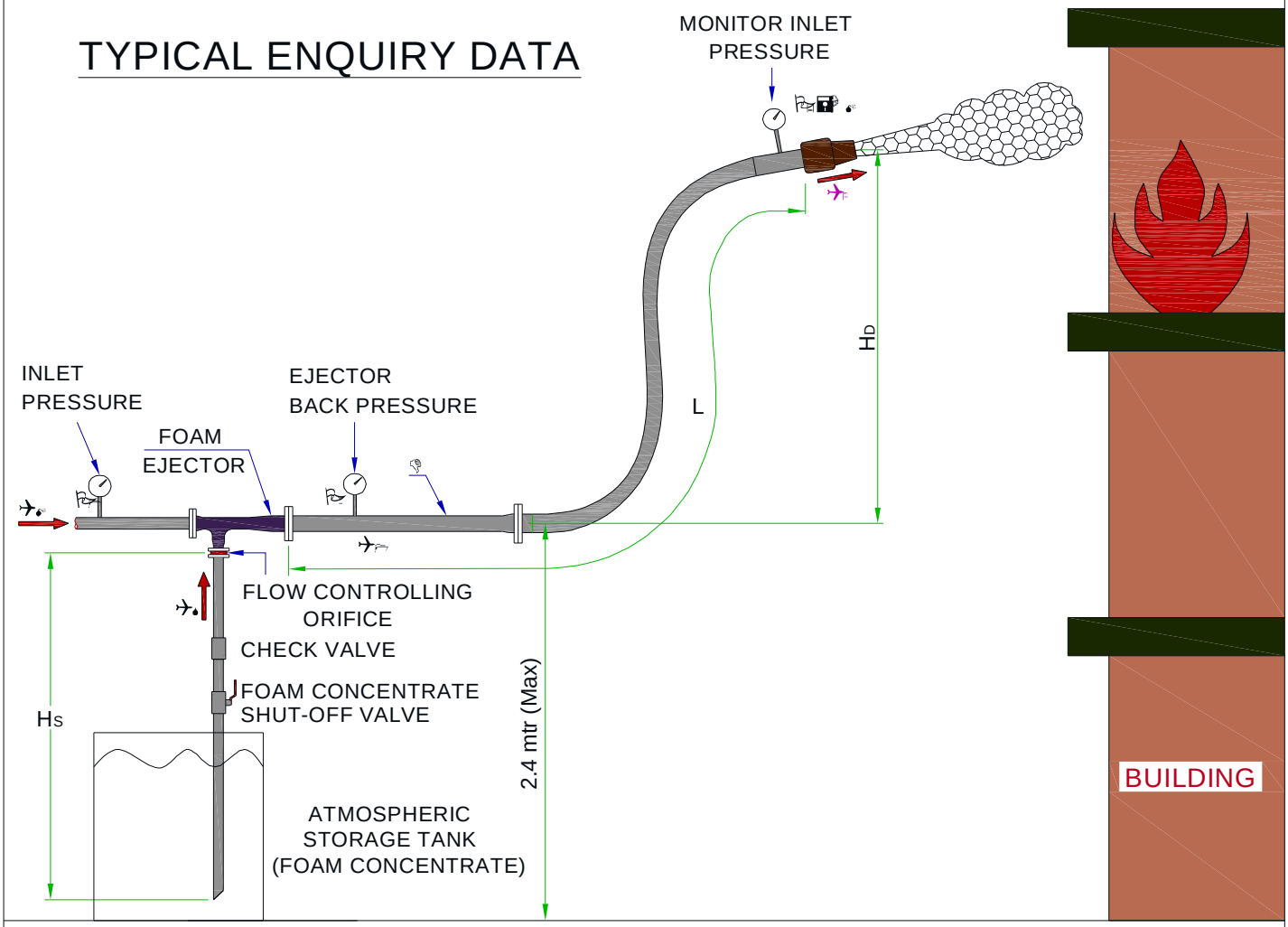
TYPICAL ENQUIRY DATA



DATA TO BE FILLED BY THE CUSTOMER		VALUE	UNIT
P_1	Foam ejector inlet pressure		bar(g)/kg/cm²(g)/psig
P_2	Foam ejector back pressure		bar(g)/kg/cm²(g)/psig
P_3	Monitor inlet pressure = H_M (Monitor Head)		bar(g)/kg/cm²(g)/psig
Q_M	Motive flow rate		m³/hr/lph/lpm/gpm
Q_S	Suction flow rate (Foam liquid)		m³/hr/lph/lpm/gpm
Q_1	Inlet flow rate of foam into the discharge device		m³/hr/lph/lpm/gpm
Q_2	Monitor flow capacity		m³/hr/lph/lpm/gpm
D	Ejector Foam discharge line size (NB)		mm/inch
L	Length of foam discharge line (pipe/hose) till inlet of monitor.		mtr/ft
H_D	Hydraulic gradient (design max)		mtr/ft
H_S	Suction lift		mtr/ft
H_M	Monitor head = P_3 (Monitor inlet pressure)		bar(g)/kg/cm²(g)/psig

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